



Air Quality in the Coachella Valley and SCAQMD Dust Control Rules for Open Spaces

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Imperial, CA

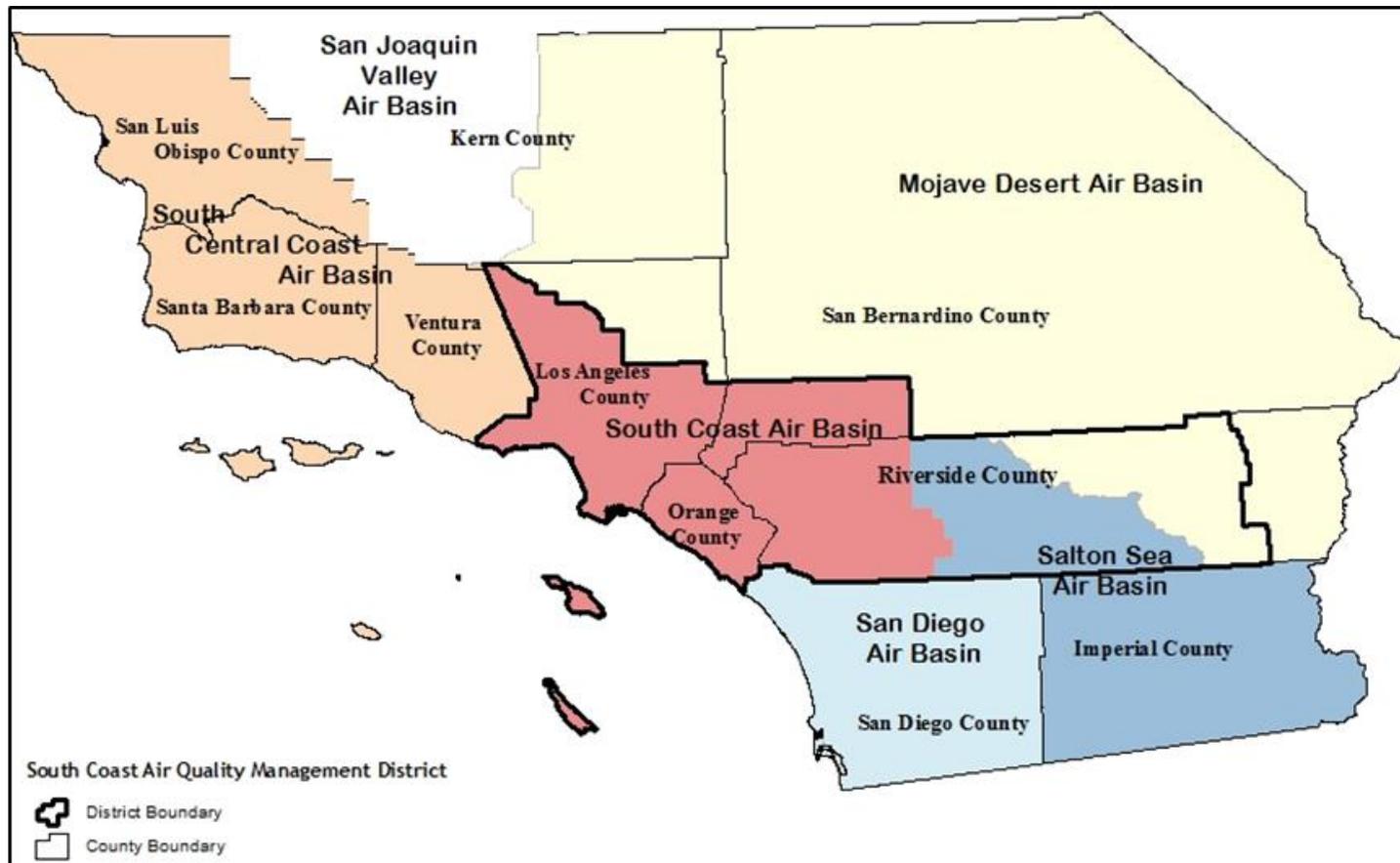


Overview

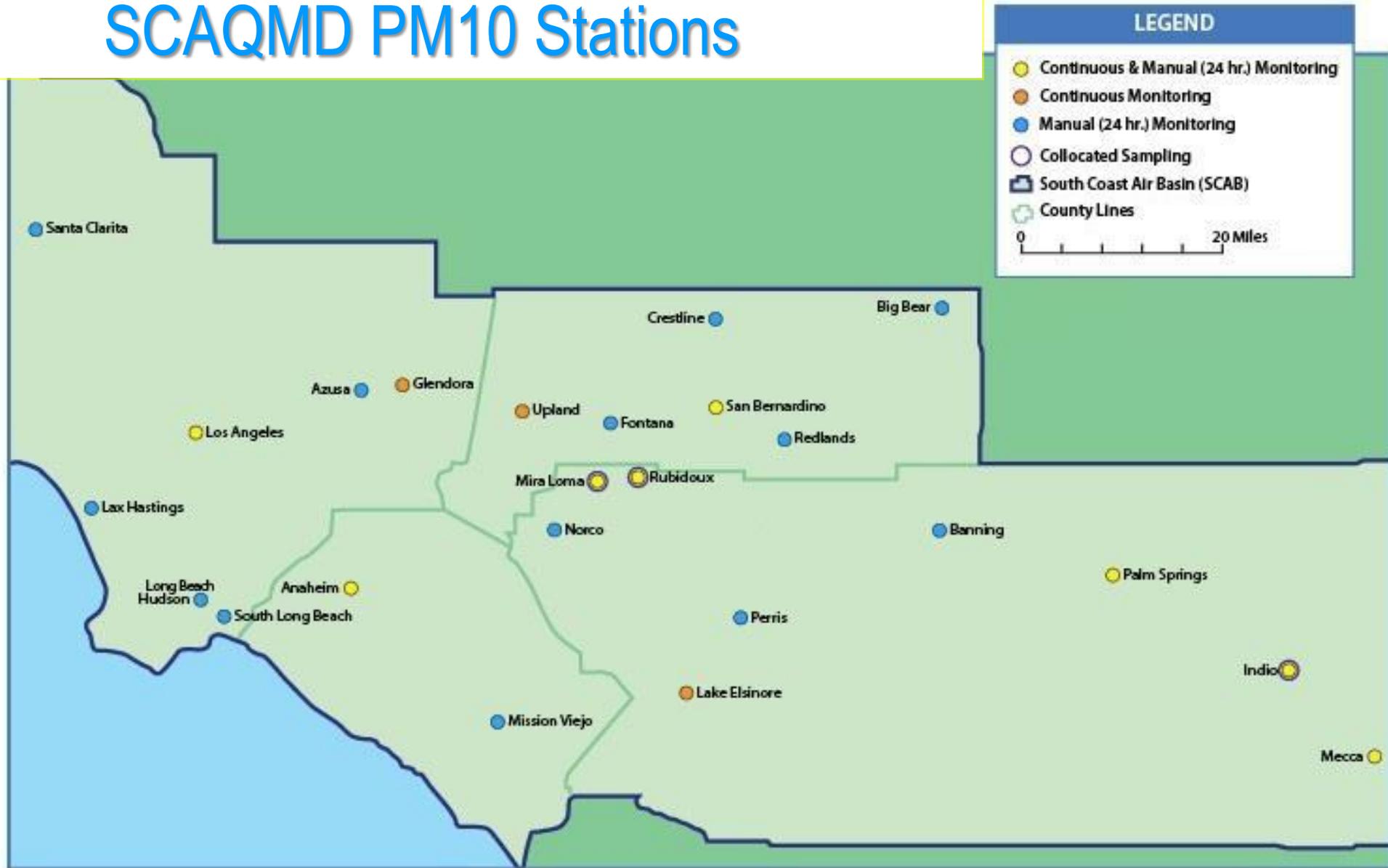
- SCAQMD Jurisdiction
- SCAQMD PM Measurements
- Air Quality Trends in the Coachella Valley
- SCAQMD Dust Rules

South Coast Air Quality Management District Boundaries

The South Coast Air Quality Management District includes all of Orange County and portions of Los Angeles, San Bernardino and Riverside Counties (including the Coachella Valley) – an area of 10,743 square miles with ~ 16.8 million people and over 10 million motor vehicles



SCAQMD PM10 Stations



Last Updated: May 19, 2016

SCAQMD PM2.5 Stations



Last Updated: May 19, 2016

SCAQMD Air Monitoring Stations (Coachella Valley)



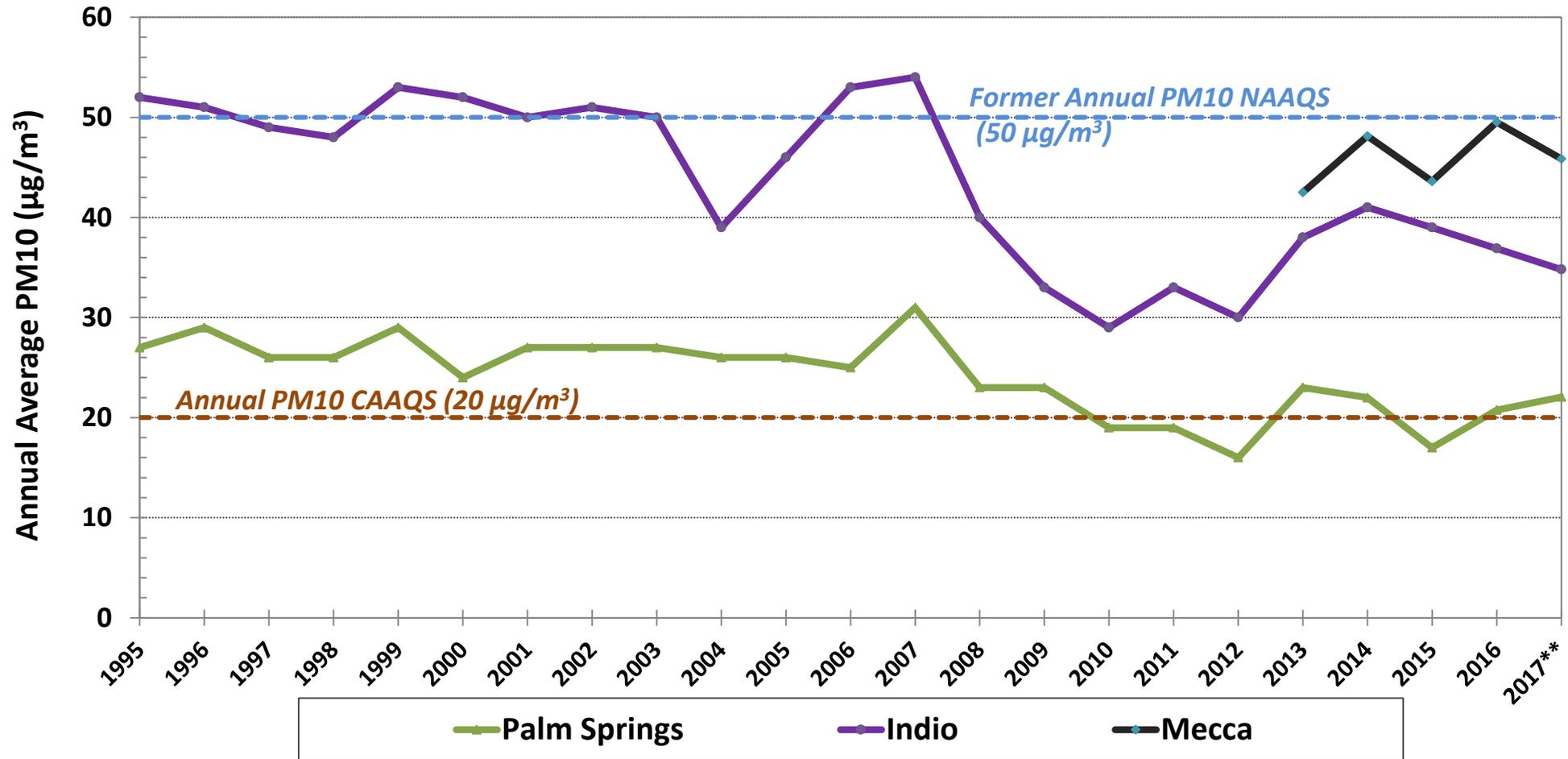
Indio – Jackson Street



Mecca – Saul Martinez Elementary School

PM10 Annual Average Trend 1995-2017*

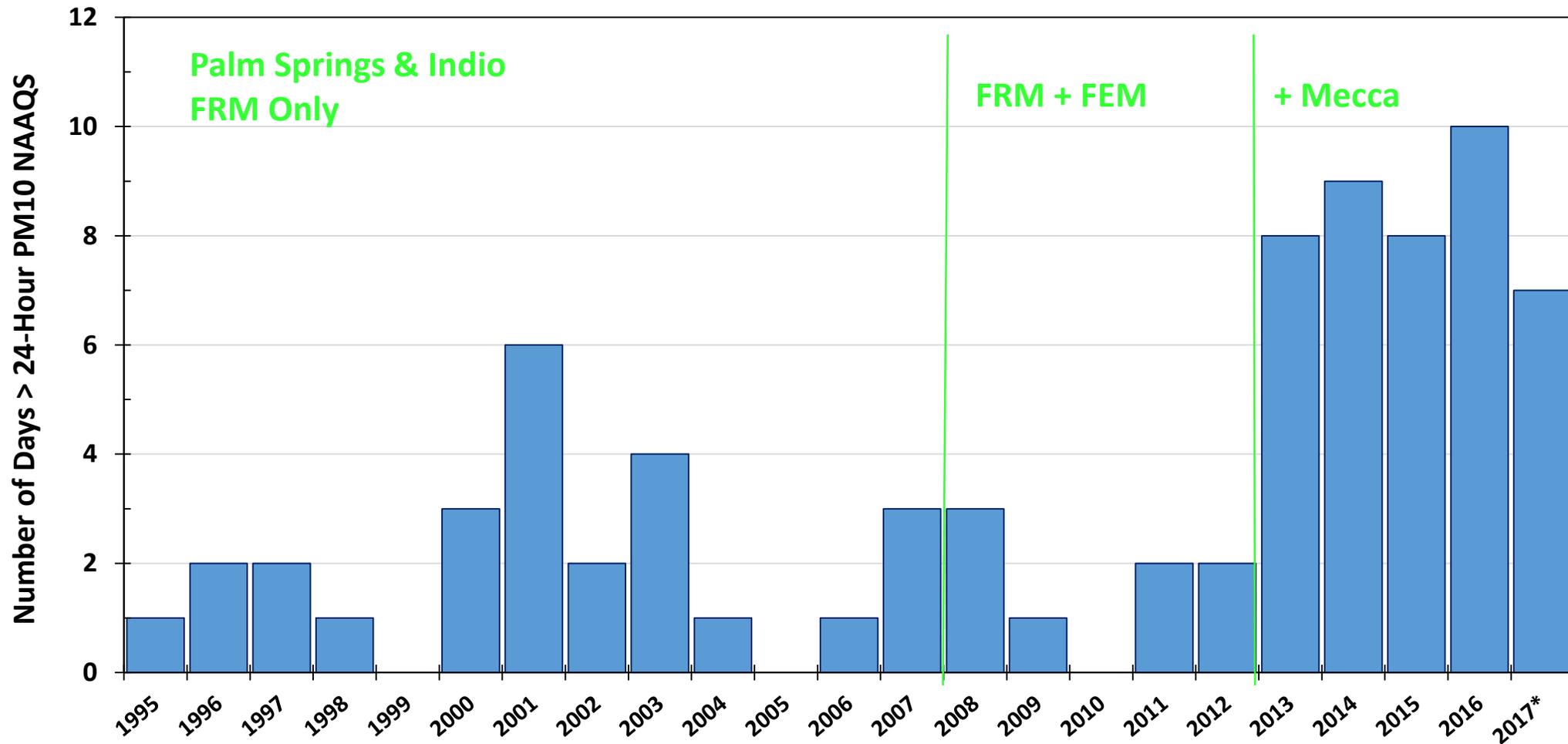
SCAQMD Coachella Valley (Riverside County) Stations



* Based on FRM data for the years 1995-2016 (except for Sal Martinez which is based on FEM)

** Based on preliminary FEM data for 2017

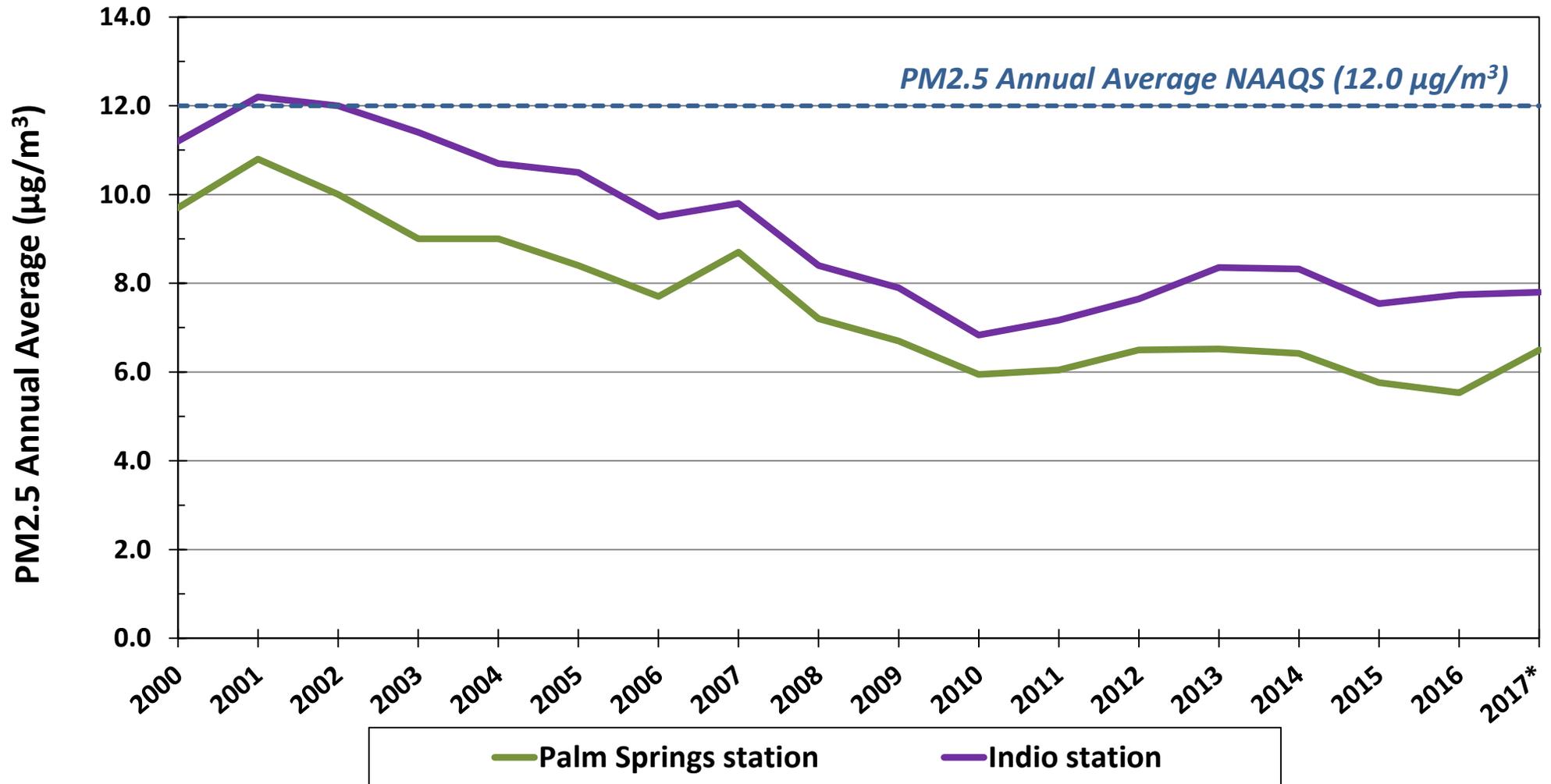
Days Exceeding the PM10 NAAQS ($150 \mu\text{g}/\text{m}^3$) All SCAQMD Coachella Valley Stations



* Based on preliminary data for 2017

PM2.5 Annual Average Trend 2000-2017*

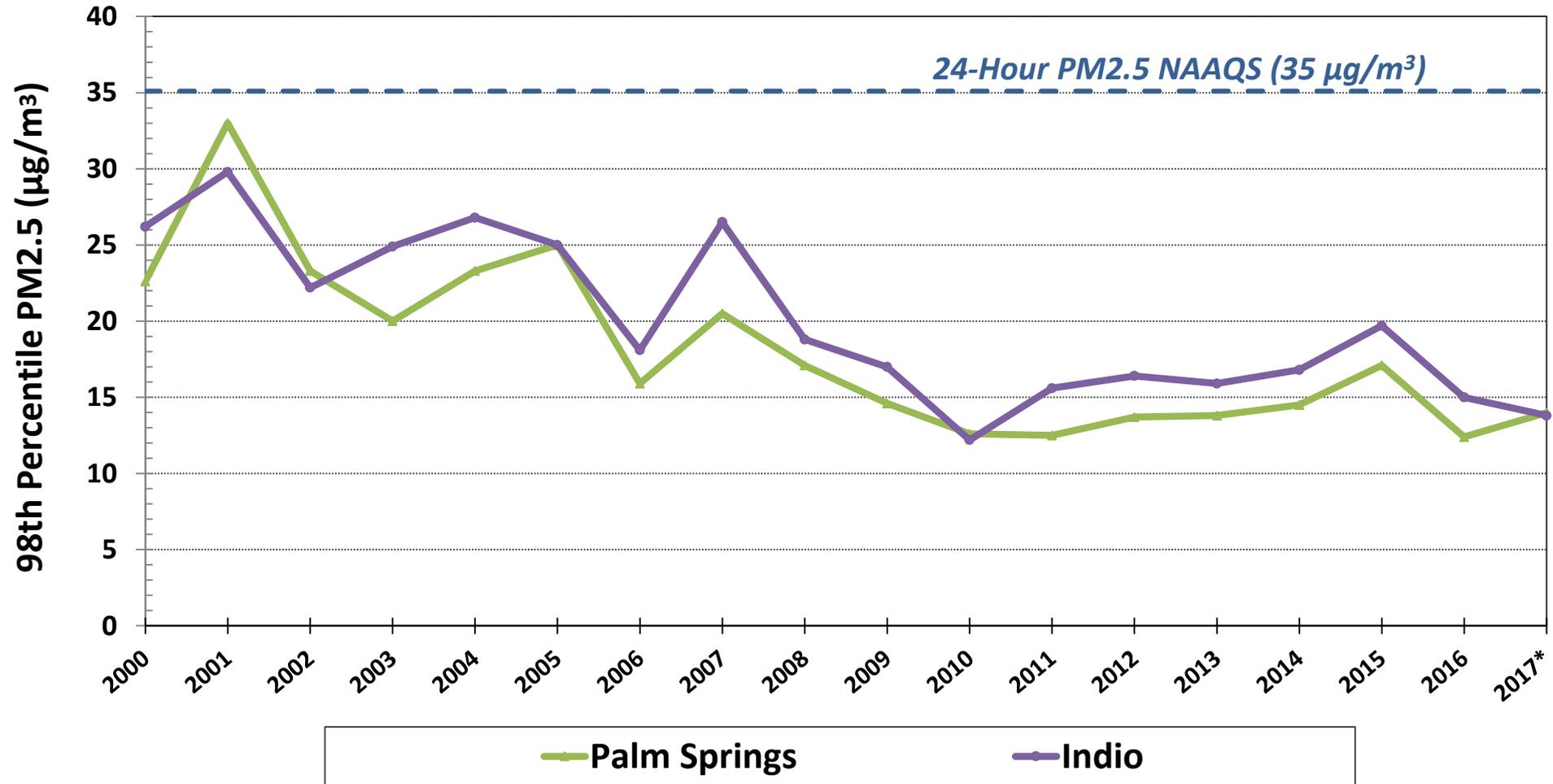
Coachella Valley (Riverside County) Stations



* Based on preliminary data for 2017

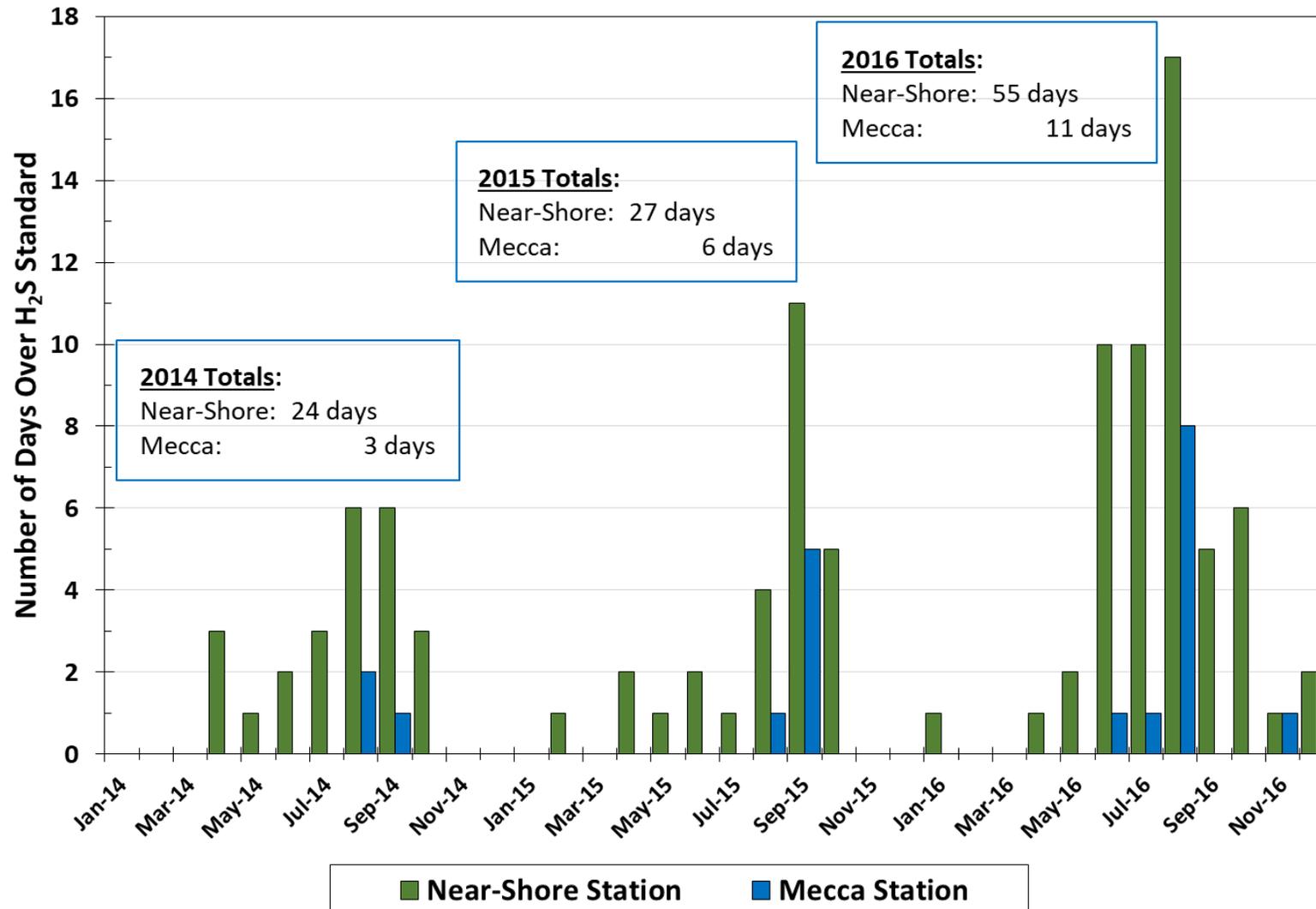
PM2.5 Annual 98th Percentile Trends 2000-2017*

Coachella Valley (Riverside County) Stations



* Based on preliminary data for 2017

Coachella Valley Station Days over State H₂S Standard (30 ppb) by Month



SCAQMD Regulatory Measures for Dust

Rule 403 (Fugitive Dust)

- **Fugitive dust** defined as particulate matter that becomes airborne, other than emitted from a stack, directly or indirectly as a result of the activities of any person
- SCAQMD fugitive dust rules apply to PM entrained in the ambient air from anthropogenic (man-made) fugitive dust sources, including **active operations** of any source capable of generating dust, such as:
 - earth-moving, construction/demolition, vehicular movement, open storage piles,
 - aggregate plants & cement manufacturing,
 - agricultural activities, including confined animal facility operation,
 - **disturbed surface areas**
 - defined as a portion of the earth's surface that has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition
 - these can generate visible emissions by wind action alone
- Prohibits fugitive dust that remains visible in the atmosphere beyond the property line of the emissions source or dust emission exceeding 20 percent opacity when resulting from motor vehicle movement

SCAQMD Regulatory Measures for Dust

Rule 403 (Fugitive Dust)

- Require actions to prevent, reduce, or mitigate fugitive dust emissions
 - **Best Available Control Measures (BACM)** [ref. R403, Tables 1, 2, 3, or 4]
- **BACM for Vacant Land** is addressed in Control Measure 20-1:
 - In instances where vacant lots are 0.10 acre or larger and have a cumulative areas of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.
- Rule 403 does not additionally address open spaces
- Other SCAQMD rules that may apply to dust:
 - Rule 401 (Visible Emissions)
 - Rule 402 (Public Nuisance)
 - Rule 1466 (Soils with Toxic Air Contaminants)
 - Rule 403.1 (Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources)

SCAQMD Regulatory Measures for Dust

Rule 403.1 (Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources)

Requirements:

- **If Wind Speed > 25 mph** (per SCAQMD Forecast or on-site measurements):
 - Stabilization (water or chemical stabilizer application) or wind breaks to reduce wind speed below 25 mph
 - Agricultural tilling or soil mulching activities must cease
- for at least 20 days after active operations have ceased, dust control measures are required to minimize wind-driven fugitive dust
- For active operations in the **Coachella Valley Blowsand Zone** (2 miles either side of I-10 from SR-111 to Jefferson Street, Indio):
 - stabilization of new man-made deposits of bulk material is required within 24 hours
 - stabilization of new deposits of bulk material originating from off-site undisturbed natural desert areas is required within 72 hours
- **Construction Project/Earth-Moving Activities**: require SCAQMD-approved Fugitive Dust Control Plan, signage, trained Dust Control Supervisor, and dust mitigation measures
 - unless a dust control plan is submitted to any city or county government that has adopted a District-approved dust control ordinance
- Exemptions: R403.1 cannot conflict with the Endangered Species Act or the non-routine or emergency maintenance of flood control channels and water spreading basins

Local Coachella Valley Dust Ordinance Measures

Local Dust Ordinances have been adopted by local jurisdictions

- Including: Riverside County, Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs and Rancho Mirage
- Based on model fugitive dust ordinance adopted by Coachella Valley Association of Governments (CVAG)
- SCAQMD Rules 403 and 403.1 establish performance criteria for local ordinances and serve as a backstop rule for the Coachella Valley



Local ordinances include:

1. Dust control plans for each construction project needing a grading permit
2. Plans to pave or chemically treat unpaved surfaces if daily vehicle trips > 150
3. 15 mph speed limits for unpaved surfaces if daily vehicle trips below 150
4. Paving or chemical treatment of unpaved parking lots
5. Actions to discourage use of unimproved property by off-highway vehicles

Questions

Do SCAQMD Rules 403 and 403.1 apply to the exposed playa from the shrinking Salton Sea?

Well...Maybe...

- SCAQMD Rules 403 and 403.1 generally do not address undisturbed, natural open lands (only specify PM entrained in the air as a result of anthropogenic fugitive dust sources)
- They do apply where there are **active operations** (earth moving, construction/demolition, vehicular movement, etc.) or disturbed surface areas near the Salton Sea under SCAQMD jurisdiction
 - Would apply to SSMP habitat restoration and dust management projects
 - SCAQMD Planning staff is monitoring progress of ICAPCD Rule 804 – Open Areas

Is the exposed playa of the Salton Sea considered a natural or an anthropogenic dust source?

It's Complicated...

- U.S. EPA Region 9 staff have suggested the Salton Sea was not formed by a natural process and, therefore, dust that results from the exposed lakebed is an anthropogenic dust source
 - Windblown dust events that violate PM NAAQS may not qualify as ***natural events that may recur*** under the U.S. EPA Exceptional Events Rule, especially without approved BACM
 - An EE demonstration may require apportionment of dust from the Salton Sea exposed playa as compared to other sources (e.g., dust entrained from thunderstorm outflows over Arizona or Mexico)

